

METHOD FOR FORMING A DIELECTRIC LAYER AND SEMICONDUCTOR DEVICE
INCORPORATING THE SAME

FIELD OF THE INVENTION

5 The present invention relates to the field of semiconductors
and, more particularly, to an improved dielectric for increasing
semiconductor performance.

CROSS-REFERENCES TO RELATED APPLICATIONS

10 This application is related to commonly assigned U.S. Patent
Application Serial Nos.: 09/653,639, METHOD FOR FORMING A BARRIER
LAYER TO INCREASE SEMICONDUCTOR DEVICE PERFORMANCE, filed August
31, 2000, by Powell et al. and 09/653,298, METHOD FOR FORMING A
DIELECTRIC LAYER AT A LOW TEMPERATURE, filed August 31, 2000, by
15 Mercaldi et al., the disclosures of which are incorporated herein
by reference. This application is a divisional of U.S. Patent
Application Serial No. 09/653,096, filed August 31, 2000, *now Patent*
No. 6576964.

BACKGROUND OF THE INVENTION

20 There is a constant demand for semiconductor devices of a
reduced size. The performance characteristics of semiconductor
capacitors, transistors, electrode layers and the like become
more critical as device size decreases. Accordingly, processes